

## Some Schools' Examinations from Different Governorates

## 1 Cairo Governorate

Heliopolis Educational Zone



Answer the following questions :

## 1 Choose the correct answer :

[a]  $\{1, 2, 3\} \dots \mathbb{N}$  ( $\in$  or  $\notin$  or  $\subset$  or  $\not\subset$ )[b] The side length of a square is 10 cm. , then its area = .....  $\text{cm}^2$   
( 100 or 50 or 40 or 200 )[c] If :  $X = \{x : x \in \mathbb{N}, 2 \leq x \leq 3\}$  , then :  $X = \dots$   
(  $\{2, 3\}$  or  $\{3\}$  or  $\{2\}$  )[d] Add 3 to the double of a number to get 19 = .....  
(  $x + 3 = 19$  or  $3x + 2 = 19$  or  $2x + 3 = 19$  )

## 2 Complete the following :

[a] The multiplicative neutral element in  $\mathbb{N}$  is .....[b]  $E \cap O = \dots$ [c] A circle whose radius length is 7 cm. , its circumference = ..... cm.  
( $\pi = \frac{22}{7}$ )[d] The perimeter of the equilateral triangle whose side length is  $x$   
= .....

## 3 [a] Determine the position of each of the following points in the coordinates plane : A (2 , 1) , B (5 , 1) , C (5 , 3) and D (2 , 3)

[b] If the age of a man now is  $x$  years where  $x \in \mathbb{N}$  , write :

(1) The age of the man since 8 years.

(2) The age of the man after 5 years.

## 4 [a] Using the properties of commutation , distribution and association , find the value of each of the following :

(1)  $37 + 81 + 63$ (2)  $519 \times 99$ [b] A circle , its diameter length is 7 cm. , find its circumference where ( $\pi = \frac{22}{7}$ )

## 5 [a] Find the area of a square in which its diagonal length is 12 cm.

[b] The following table shows the frequency distribution of the number of working hours of 50 workers :

Sets	4 -	6 -	8 -	10 -	Total
Frequency	12	8	16	14	50

Draw the frequency polygon which represent these data.

## Additional question

Complete :

[a] If :  $x + 8 = 15$  ,  $x \in \mathbb{N}$  , then :  $x = \dots$ 

[b] The number of axes of symmetry of the equilateral triangle is .....

[c] The area of a parallelogram whose base length is 8 cm. and height 2.5 cm. is .....  $\text{cm}^2$ 

[d] 1 , 4 , 8 , 13 , ..... , ..... (in the same pattern)

## 2 Cairo Governorate

Ain Shams Educational Zone  
Helmiet El-Zaitoun E.L.S.

Answer the following questions :

## 1 Choose the correct answer :

[a] Add 6 to the number  $x$  , the symbolic expression is .....(  $6 - x$  or  $6x$  or  $x - 6$  or  $x + 6$  )[b] 25 .....  $\mathbb{N}$  ( $\in$  or  $\notin$  or  $\subset$  or  $\not\subset$ )[c] The square whose diagonal length is 8 cm. , its area = .....  $\text{cm}^2$   
( 64 or 32 or 16 or 8 )[d] The circumference of a circle whose radius length is 14 cm.  
equals ..... cm. ( $\pi = \frac{22}{7}$ ) ( 14 or 22 or 44 or 88 )

## 2 Complete the following :

[a] The additive identity element in  $\mathbb{N}$  is .....

[b] The set of prime numbers which are less than 17 is .....

[c] The area of a triangle whose base length is 5 cm. and the corresponding height of it is 4 cm. = .....  $\text{cm}^2$ [d]  $6 \times 0 = \dots$

## Final Examinations

- 3 [a] Use the distributive property of multiplication over addition to complete :

$$50 \times 8 + 50 \times 7 = 50 \times (\dots + \dots) = 50 \times \dots = \dots$$

[b] If : A (2, 3) and B (8, 3), then find the length of  $\overline{AB}$

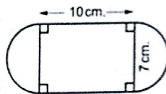
- 4 [a] By using the properties of addition and multiplication find :

(1)  $28 + 59 + 72 + 41$

(2)  $8 \times 137 \times 125$

[b] Calculate the perimeter of the opposite figure

where  $(\pi = \frac{22}{7})$



- 5 [a] Which is greater in area ?

A triangle whose base length is 12 cm. and its corresponding height = 8 cm. or a square of side length 7 cm.

[b] Represent the following distribution by frequency polygon :

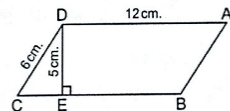
Sets	5 -	7 -	9 -	11 -	13 -
Frequency	4	12	10	7	8

### Additional question

- [a] In the opposite figure :

ABCD is a parallelogram where AD = 12 cm. ,  
CD = 6 cm. , ED = 5 cm. and  $\overline{ED} \perp \overline{BC}$

Find the area of the parallelogram.



- [b] Complete in the same pattern :

(1) 26, 20, 15, 11, ..... (2) 1, 3, 9, ..... , .....

## 3 Cairo Governorate

Heliopolis Educational Zone  
St. Joseph's School



Answer the following questions :

- 1 Complete :

[a] The set  $\{a : a \in \mathbb{N}, a < 2\}$  in the listing method = .....

[b] The circumference of a circle = .....  $\times$  diameter length

[c] The smallest natural number is .....

[d] The property used in :  $a \times (b \times c) = (a \times b) \times c$  is .....

## Final Examinations



- 2 Choose the correct answer :

[a] If we subtract 5 from the number  $x$ , we get .....

(  $4x$  or  $5-x$  or  $x-5$  or  $x+5$  )

[b]  $\frac{0}{2}$  .....  $\mathbb{N}$

(  $\in$  or  $\notin$  or  $\subset$  or  $\not\subset$  )

[c] The sum of two odd numbers is ..... number.

( an odd or a prime or an even )

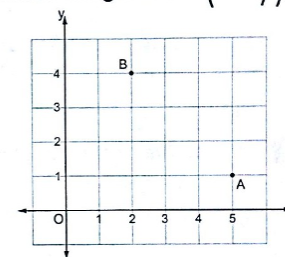
[d] 99 added to the neutral element of multiplication in  $\mathbb{N}$  = .....

( 98 or 99 or 100 or 101 )

- 3 [a] Find the circumference of the circle of diameter length 14 cm.  $(\pi = \frac{22}{7})$

[b] In the opposite figure :

Write the coordinates  
of each of the points  
A and B



- 4 [a] Find the area of each :

(1) A triangle whose base length is 10 cm. and the corresponding height is 9 cm.

(2) A square of diagonal length 8 cm.

[b] Find using the properties of multiplication :  $915 \times 1001$

- 5 [a] If :  $a = 2$ ,  $b = 0$  and  $c = 3$ , find the value of :  $3 \times a + 9 \times b - c$

[b] The following table shows the marks of some pupils in mathematics :

Marks	10 -	20 -	30 -	40 -	Total
Frequency	7	8	10	5	30

Graph these data using the frequency polygon.

### Additional question

[a] Graph the following figure : A (1, 2), B (5, 2) and C (3, 7), then draw its line of symmetry.

[b] Complete in the same pattern :

(1) 1, 4, 9, 16, ..... (2) 3, 9, 27, ..... , .....



# 4 Cairo Governorate

Al-Khalifa and Al-Mokafam Educational Zone  
Al-Helmia Experimental Language School



Answer the following questions :

## 1 Complete :

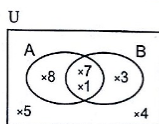
- [a] The additive neutral element in  $\mathbb{N}$  is .....
- [b] The radius length of the circle whose diameter length is 8 cm. = .....
- [c] If :  $5x = 20$  , then :  $x =$  .....
- [d]  $0.2753 \approx$  ..... (to the nearest hundredth)
- [e] The circumference of a circle =  $\pi \times$  .....
- [f] If :  $A \subset B$  , then :  $A \cap B =$  .....
- [g]  $8 \times (14 - 4) = 8 \times$  .....
- [h] If :  $Y = \{x : x \in \mathbb{N}, 1 < x < 5\}$  , then :  $Y =$  ..... (in the listing method)

## 2 Choose the correct answer :

- [a] The triangle has ..... altitudes. ( 1 or 2 or 3 or 4 )
- [b] The sum of any two natural numbers .....  $\mathbb{N}$   
(  $\in$  or  $\notin$  or  $\subset$  or  $\not\subset$  )
- [c]  $13.56 \div 100 =$  .....  
( 1356 or 0.1356 or 13560 or 135.6 )
- [d]  $\mathbb{N} \cap \mathbb{N} =$  ..... (  $\emptyset$  or  $\mathbb{N}$  or 0 or  $\{0\}$  )
- [e] If :  $a = 4$  , then :  $a - 1 =$  ..... ( 4 or 1 or 5 or 3 )
- [f] The area of a triangle = .....  $\times$  base length  $\times$  the corresponding height  
( 2 or 3 or half or 4 )
- [g] The sum of two numbers is 7 , one of them is  $x$  , then the other = ..... (  $7 + x$  or  $7 - x$  or  $x - 7$  or  $7x$  )
- [h]  $20 \text{ dm.}^2 =$  .....  $\text{cm.}^2$  ( 20 or 200 or 2000 or 2 )

## 3 [a] Using the opposite Venn diagram , list each of the following sets :

- (1)  $U$   
(2)  $A \cap B$   
(3)  $B - A$



## [b] Using the properties of addition to find the value of :

$$32 + 47 + 68 + 3$$



## 4 [a] Find the result of :

(1)  $3\,968 + 124$  (2)  $7.21 \times 1000$

## [b] Find the area of the square whose diagonal length is 14 cm.

## 5 [a] Use the distributive property find the value of :

$$217 \times 18 + 217 \times 82$$

## [b] In the opposite figure :

The length of the diameter  $\overline{AB}$  of a semicircle is 10 cm.



Find the distance around the figure ( $\pi = 3.14$ )

## Additional question

### [a] The lengths of the diagonals of a rhombus are 14 cm. and 10 cm.

Calculate its area.

### [b] Solve each of the following equations :

(1)  $3x - 5 = 16, x \in \mathbb{N}$  (2)  $x + 2 = 2, x \in \mathbb{N}$

# 5 Cairo Governorate

El-Nozha Directorate of Education  
Math Department



Answer the following questions :

## 1 Complete each of the following :

- [a] For  $a \in \mathbb{N}, b \in \mathbb{N}$  , then :  $a \times b$  .....  $\mathbb{N}$
- [b]  $23 \times (92 + 8) = 23 \times$  ..... = .....
- [c] The set of natural numbers less than 5 is .....
- [d] The sum of 2 numbers is 21 , if one of them is  $x$  , then the other is .....
- [e] The side length of a square is 10 cm. , then its area is .....

## 2 Choose the correct answer :

- [a] The set of even numbers ..... the set of natural numbers  
(  $\subset$  or  $\in$  or  $\not\subset$  or  $\notin$  )
- [b] The base length of a triangle is 8 cm. , its corresponding height is 5 cm. , then its surface area = ..... ( 40 cm. or  $40 \text{ cm.}^2$  or  $20 \text{ cm.}^2$  )

[c] If :  $X = \{x : x \in \mathbb{N}, 3 \leq x < 5\}$ , then :  $X = \dots\dots\dots$   
 ( {4} or {3} or {3, 4} or {4, 5} )

[d] The longest chord in a circle is 7 cm. , then the circumference of the circle is ..... cm. ( $\pi = \frac{22}{7}$ ) ( 3.5 or 7 or 22 or 44 )

3 [a] In a 2-dimensional coordinate plane , locate the points :

A ( 5 , 0 ) , B ( 9 , 0 ) , C ( 9 , 4 ) and D ( 5 , 4 ) , then write the name of the shape ABCD

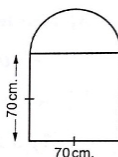
[b] Use the commutative and associative properties in  $\mathbb{N}$  to calculate :  
 $872 + 199 + 128 + 801$

4 [a] If the age of a man now is  $x$  years where  $x \in \mathbb{N}$ , find his age after 7 years.

[b] In the opposite figure :

A window in the form of a square of side length 70 cm. and above it a semicircle.

Calculate the perimeter of the window.



5 The following table shows the marks of 40 pupils in a math exam :

Sets	10 –	20 –	30 –	40 –	50 –	Total
Frequency	5	7	12	A	7	40

[a] Find the value of A

[b] Draw the histogram and the frequency polygon which represent these data.

### Additional question

The following table shows the number of visitors of the museum in four days :

Day	First	Second	Third	Fourth
Number	100	100	200	400

Represent these data by a pie graph.



## 6 Cairo Governorate

El Waili Educational Directorate  
 Notre Dame des apotres School



Answer the following questions :

1 Complete :

[a] ( $\dots\dots\dots \times 3$ )  $\times 28 = 10 \times (3 \times 28)$

[b] The additive neutral element in  $\mathbb{N}$  is .....

[c] If :  $5K = 40$ , then :  $K = \dots\dots\dots$

[d] The area of the square whose diagonal length is 10 cm. = .....  $\text{cm}^2$

2 Choose the correct answer :

[a]  $5 - 7 \dots\dots\dots \mathbb{N}$  ( $\subset$  or  $\in$  or  $\not\subset$  or  $\notin$ )

[b] If the sum of two numbers  $x$  and  $y$  is 20 , then :  $y = \dots\dots\dots$

(  $20 + x$  or  $20 - x$  or  $x - 20$  or  $\frac{x}{20}$  )

[c] A circle of radius 3.5 cm. long , then its circumference

= ..... cm. ( $\pi = \frac{22}{7}$ ) ( 7 or 11 or 22 or 44 )

[d] The square whose diagonal length is 8 cm. , then its area

= .....  $\text{cm}^2$  ( 64 or 32 or 16 or 9 )

3 [a] Use the properties of commutative and association in  $\mathbb{N}$  to find the result of :

$872 + 199 + 128 + 801$

[b] Complete : If :  $x - 5 = 19$ , where  $x \in \mathbb{N}$ , then :  $x = \dots\dots\dots$

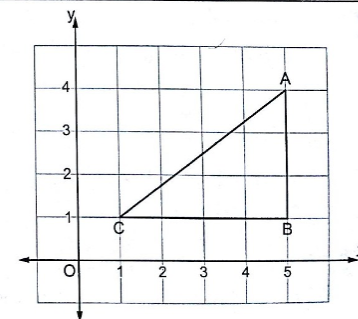
4 In the opposite figure :

Find :

[a] The coordinates of A

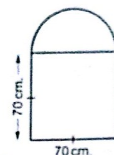
[b] The distance between A and B

[c] The area of  $\triangle ABC$





- 5 [a] Calculate the perimeter of the opposite figure where  $(\pi = \frac{22}{7})$



- [b] Draw the histogram which represent the following table :

Sets	10 -	20 -	30 -	40 -	Total
Frequency	10	12	18	10	50

### Additional question

Choose the correct answer :

- [a] A rhombus in which the length of its diagonals are 10 cm. and 12 cm. , its area = ..... cm<sup>2</sup> (120 or 60 or 24 or 32)
- [b] The opposite figure : represents ..... (reflection or translation or rotation)
- [c] The number of axes of symmetry of the rectangle = ..... (0 or 1 or 2 or 4)
- [d] If :  $3x = 45$  ,  $x \in \mathbb{N}$  , then :  $x =$  ..... (42 or 48 or 5 or 15)

## 7 Giza Governorate

Dokki Educational Directorate  
Modern Narmar Language School



Answer the following questions :

### 1 Complete :

- [a] The additive neutral element in  $\mathbb{N}$  is .....
- [b]  $\mathbb{N} - \{0\} =$  .....
- [c] If  $x$  is an even number , then  $x + 2$  is an ..... number.
- [d] If :  $945 = (x \times 100) + 45$  , then :  $x =$  .....
- [e]  $25 \times 101 = 25 \times (\text{.....} + \text{.....})$

### 2 Choose the correct answer :

- [a] An odd number + an odd number = ..... number.  
( an odd or an even or a prime )



- [b] If  $E =$  set of even numbers ,  $O =$  set of odd numbers , then :

$$E \cup O = \text{.....} (\{2\} \text{ or } \{2, 5\} \text{ or } O \text{ or } \mathbb{N})$$

- [c]  $(48 \div 9) \text{.....} \mathbb{N}$  ( $\in$  or  $\notin$  or  $\subset$  or  $\not\subset$ )

- [d] The diameter length of a circle whose circumference is 44 cm.  
= ..... cm. ( $\pi = \frac{22}{7}$ ) (28 or 21 or 14 or 7)

- [e] The square whose diagonal is 8 cm. long , its area = ..... cm<sup>2</sup>  
( 8 or 16 or 32 or 64 )

- 3 [a] In a 2-dimensional coordinate plane , graph the points  $A(3, 0)$  ,  $B(0, 4)$  ,  $C(3, 8)$  and  $D(6, 4)$  , then join them.  
What is the name of this shape ?

- [b] Calculate using commutative , associative and distributive properties :

- (1)  $25 \times 65 \times 4$  (2)  $35 \times 40 + 65 \times 40$   
(3)  $192 + 488 + 308 + 12$

- 4 [a] Write the mathematical expression for each of the following :

- (1) 5 is subtracted from twice a number.  
(2) The quotient of a number and 5 is increased by 2  
(3) Four times a number decreased by 2 is 10

- [b] Find the area of a triangle whose base is 20 cm. long and its corresponding height is 9 cm. long.

- 5 [a] Find the circumference of a circle whose radius length is 14 cm. ( $\pi = 3.14$ )

- [b] The following table represents the frequency distribution of the marks of a group of students in an exam :

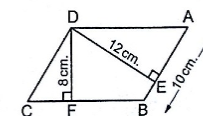
Sets	10 -	20 -	30 -	40 -	50 -	60 -	Total
Number of students	7	9	13	10	6	5	50

Draw the frequency polygon of this distribution.

### Additional question

The opposite figure ABCD is a parallelogram ,  
 $AB = 10$  cm. ,  $DE = 12$  cm. ,  $DF = 8$  cm. Find :

- (1) The area of the parallelogram ABCD  
(2) The length of BC



## 8 Giza Governorate

El-Haram Educational Directorate  
Orman Modern School

Answer the following questions :

## 1 Complete :

- [a] The set of even number (E) – the set of odd number (O) = .....
- [b] The multiplicative neutral element in  $\mathbb{N}$  = .....
- [c] Shorouk saved  $x$  pounds , her father gave her 10 pounds , then she has .....
- [d]  $a + b = b +$  .....
- [e] The smallest counting number is .....
- [f] The side length of a square is 10 cm. , then its area = .....

## 2 Choose the correct answer :

- [a]  $3 + 9$  .....  $\mathbb{N}$  ( $<$  or  $\neq$  or  $\in$  or  $\notin$ )
- [b] Twice the number  $x$  subtracted 3 from it = .....  
( $x - 3$  or  $2x + 3$  or  $2x - 3$  or  $3 - 2x$ )
- [c] The circle whose diameter length is 14 cm. , its circumference = ..... cm. (55 or 44 or 66 or 77)
- [d] If :  $X = \{x : x \in \mathbb{N} \mid 2 \leq x \leq 3\}$  , then :  $X =$  .....  
( $\{3, 2\}$  or  $\{3\}$  or  $\{2\}$  or  $\emptyset$ )
- [e]  $\frac{0}{5} =$  ..... (0 or 1 or 5 or 50)
- [f]  $\{2, 3, 0, 4\}$  .....  $\mathbb{N}$  ( $<$  or  $\neq$  or  $\in$  or  $\notin$ )

## 3 Which is greater in area ?

A square whose diagonal length is 10 cm. or a triangle in which its base length is 8 cm. and its corresponding height is 12 cm.

4 Use the operation properties in  $\mathbb{N}$  to calculate :

- [a]  $8 \times 137 \times 125$  [b]  $28 + 59 + 72$

## 5 [a] Represent the following set on the number line :

The set of natural numbers less than 5

[b] Represent the following data by a histogram and a frequency polygon :

Sets	10 –	20 –	30 –	40 –	50 –	60 –	Total
Frequency	5	9	13	10	7	4	48



## Additional question

- [a] On the cartesian coordinates plane , determine the points :  
A (2 , 2) , B (5 , 2) , C (5 , 8) and D (2 , 8) If  $\overline{BC}$  is the axis of reflection of the figure ABCD , then determine the image of the figure ABCD
- [b] Solve each of the following equations in  $\mathbb{N}$  :  
(1)  $\frac{1}{6}x - 4 = 2$  (2)  $2x + 9 = 21$

## 9

## Giza Governorate

Maths Inspection



Answer the following questions :

## 1 Complete :

- [a] The additive neutral element in  $\mathbb{N}$  is .....
- [b] If :  $X = \{x : x \in \mathbb{N} , 4 < x < 6\}$  , then :  $X =$  .....
- [c] The probability of the impossible event = .....
- [d]  $\frac{\text{The circumference of the circle}}{\text{The length of its diameter}} =$  .....
- [e]  $3.214 \approx$  ..... (to the nearest  $\frac{1}{100}$ )

## 2 Choose the correct answer :

- [a]  $\{\frac{1}{3}, 1, 2\}$  .....  $\mathbb{N}$  ( $\in$  or  $\notin$  or  $\subset$  or  $\not\subset$ )
- [b] The number of the altitudes of any triangle = .....  
(4 or 1 or 3 or 2)
- [c] The multiplicative neutral element in  $\mathbb{N}$  is .....  
(1 or 0 or 2 or 3)
- [d]  $\mathbb{N} - \mathbb{C} =$  ..... ( $\{1\}$  or  $\{0\}$  or  $\mathbb{N}$  or  $\emptyset$ )
- [e] The probability of the certain event = .....  
(2 or 1 or 0 or 3)

3 [a] Use the commutative and associative properties in  $\mathbb{N}$  to find the value of :  $38 + 20 + 62$ 

- [b] If :  $X = \{1, 2, 3, 5\}$  and  $Y = \{4, 5\}$  , then find :  
(1)  $X \cup Y$  (2)  $X \cap Y$



- 4 [a] If the price of 25 metres of cloth is L.E. 62.5 , what is the cost of one metre ?

[b] A square whose side length is 5 cm. Calculate its area.

- 5 Represent the following data by a frequency polygon :

Sets	5 -	10 -	15 -	20 -	25 -
Frequency	4	9	12	7	2

### Additional question

[a] Find the area of the rhombus of side length 8 cm. and its height is 10 cm.

[b] Solve in  $\mathbb{N}$ :

(1)  $x - 3 = 7$

(2)  $3x + 9 = 15$

## 10 Alexandria Governorate

East Educational Zone  
Supervision of Maths



Answer the following questions :

- 1 Choose the correct answer :

[a]  $\{2, 3, 0.4\}$  .....  $\mathbb{N}$  ( $\in$  or  $\notin$  or  $\subset$  or  $\supset$ )

[b] The smallest natural number is .....

(0 or 1 or 2 or 3)

[c] Subtracting 3 from the double of the number  $x =$  .....

( $x - 3$  or  $2x - 3$  or  $3x + 2$  or  $3x$ )

[d] A triangle of base length 7 cm. and its corresponding height is 4 cm. , then its area = .....  $\text{cm}^2$  (28 or 14 or 11)

- 2 Complete :

[a] Add 4 to the number  $y =$  .....

[b] A circle of radius length 5 cm. , then its diameter length = ..... cm.

[c] The multiplicative identity element is .....

[d]  $23 + 35 =$  ..... + 23 (..... property)

- 3 [a] If the radius length of a circle is 7 cm. Find its circumference.

[b] Use the properties of addition and multiplication to solve :

(1)  $156 + 871 + 344 + 129$  (2)  $4 \times 17 \times 25$



- 4 [a] Find the area of the square whose diagonal length is 10 cm.

[b] In two dimensional coordinates , plot the points A (2 , 5) , B (5 , 2) and C (5 , 8) , then name the figure.

- 5 [a] Complete :

(1) Area of triangle =  $\frac{1}{2} \times$  .....  $\times$  .....

(2) The sum of what Manal and Noha have is 10 pounds , if Manal has  $x$  pounds , then Noha has ..... pounds.

[b] The following table shows the number of working hours of 50 workers :

Sets	4 -	6 -	8 -	10 -
Frequency	10	8	12	14

Represent these data by a frequency polygon.

### Additional question

The following table represents the production of a factory for 4 kinds of electric sets in a month :

The kind of the set	TV	Washing machine	Heater	Oven	Total
The number of sets	50	100	25	.....	200

[a] Complete the table.

[b] Represent these data by a pie graph.

## 11 Alexandria Governorate

Central Zone of Education  
EGC



Answer the following questions :

- 1 Complete :

[a] The multiplicative neutral element in  $\mathbb{N}$  is .....

[d] The least number in the set of counting numbers is .....

[c] If :  $X = \{x : x \in \mathbb{N}, 1 \leq x \leq 6\}$  , then :  $X =$  .....

[d] The length of the diagonal of a square is 12 cm. , then its area = .....  $\text{cm}^2$

**2 Choose the correct answer :**

- [a]  $(3 + 9) \dots \mathbb{N}$  ( $\subset$  or  $\not\subset$  or  $\in$  or  $\notin$ )  
 [b] If :  $m - 3 = 9$ , then :  $m = \dots$  (6 or 12 or 27 or 15)  
 [c] The length of the base of a triangle is 10 cm. and its corresponding height is 4 cm. , then its area = .....  
 (40 cm. or 40 cm<sup>2</sup> or 20 cm. or 20 cm<sup>2</sup>)  
 [d] A circle of diameter length 7 cm. , then its circumference = ..... cm. ( $\pi = \frac{22}{7}$ ) (3.5 or 7 or 22 or 44)

**3 [a] Which is greater in area ?**

A square whose diagonal is 10 cm. long or the right-angled triangle in which the lengths of the sides of the right angle are 15 cm. and 8 cm.

[b] Using the properties of commutation , association and distribution in  $\mathbb{N}$  , find the result of the following (write the used property) :

- (1)  $4 \times 31 \times 25$  (2)  $42 + 79 + 58$

**4 In the orthogonal cartesian coordinates , locate the points :**

A (9 , 3) , B (4 , 3) , C (4 , 7) and D (9 , 7) , then complete :

- [a] The length of  $\overline{AB}$  = ..... units.  
 [b] The length of  $\overline{BC}$  = ..... units.  
 [c] The figure ABCD is called .....  
 [d] The perimeter of the figure ABCD = ..... units.

**5 [a] Write the symbolic expression for each situation :**

- (1) Subtract 5 from the double of the number y  
 (2) Add 7 to three times of the number z

[b] The following table shows the frequency distribution of the number of working hours of 50 workers :

Sets	4 –	6 –	8 –	10 –	Total
Frequency	12	8	16	14	50

Draw the frequency polygon that represents these data.



**Additional question**

Match :

- [a] If :  $5x = 10$  ,  $x \in \mathbb{N}$  , then :  $x = \dots$  (1) 1  
 [b] The number of axes of symmetry of the isosceles triangle is ..... (2) 40  
 [c] The area of the rhombus of side length 10 cm. and height 4 cm. = ..... cm<sup>2</sup> (3) 14  
 [d] 6 , 8 , 10 , 12 , ..... (in the same pattern) (4) 2

**12 Alexandria Governorate**

West Educational Administration  
Mathematics Supervision



Answer the following questions :

**1 Choose the correct answer :**

- [a]  $(3 + 9) \dots \mathbb{N}$  ( $\in$  or  $\notin$  or  $\subset$  or  $\not\subset$ )  
 [b] Twice the number  $x$  subtracted 3 from it = .....  
 ( $x - 3$  or  $2x + 3$  or  $2x - 3$  or  $3 - 2x$ )  
 [c] If  $x$  is an odd number , then  $x + 2$  is .....  
 (an even or an odd or a prime)  
 [d] The circumference of the circle = .....  
 ( $\pi r$  or  $2\pi r$  or  $3\pi r$  or  $4\pi r$ )

**2 Complete the following :**

- [a] The area of the square = .....  
 [b] Area of rectangle whose dimensions are 4 cm. and 9 cm. = .....  
 [c] If :  $x + 8 = 15$  ,  $x \in \mathbb{N}$  , then :  $x = \dots$   
 [d]  $32 + (\dots + 59) = (32 + 68) + \dots$

**3 [a] Using the properties of multiplication in  $\mathbb{N}$  to find the following :**

$$8 \times 137 \times 125$$

[b] Find the area of triangle whose the length of its base is 8 cm. and its corresponding height equals 5 cm.

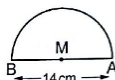


4 [a] The age of a man is  $x$  years where  $x \in \mathbb{N}$ , find :

- (1) The age of the man after seven years.  
(2) The age of the man since 10 years.

[b] Find the area of the square whose diagonal length is 8 cm.

5 [a] Calculate the perimeter of the opposite figure where  $AB = 14$  cm.



[b] Represent the following data by a frequency polygon.

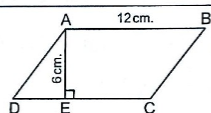
Sets	10 –	20 –	30 –	40 –	Total
Frequency	8	12	10	5	35

### Additional question

[a] From the opposite figure :

Find the area of the parallelogram ABCD

[b] Solve the equation :  $2x + 9 = 21$  where  $x \in \mathbb{N}$



## 13 El-Kalyoubia Governorate

Maths Supervision



Answer the following questions :

1 Choose the correct answer :

- [a] If :  $x + 7 = 19$ ,  $x \in \mathbb{N}$ , then :  $x =$  .....  
( 12 or 11 or 20 or 13 )  
[b] The multiplicative neutral element in  $\mathbb{N}$  is .....  
( 2 or 1 or zero or 10 )  
[c]  $9 + 2$  .....  $\mathbb{N}$  (  $\in$  or  $\subset$  or  $\notin$  or  $\not\subset$  )  
[d] Twice the number  $x$  subtracted 3 from it = .....  
(  $2x - 3$  or  $x - 3$  or  $3 - 2x$  or  $2x + 3$  )

2 Complete :

- [a] The area of a square with diagonal length 8 cm. is .....  $\text{cm}^2$   
[b]  $(24 \times \dots) \times \dots = 24 \times (K \times N)$



[c] The circumference of a circle with diameter length 7 cm. is ..... cm.  
(  $\pi = \frac{22}{7}$  )

[d] The smallest natural number is .....

3 Using the properties in  $\mathbb{N}$  to find the result of :

- [a]  $79 + 36 + 21 + 64$  [b]  $4 \times 17 \times 25$

4 [a] Using distribution property to find the value of :  $25 \times 40 + 25 \times 60$

[b] Find the area of the triangle whose base length is 6 cm. and its corresponding height is 4 cm.

5 [a] Complete : The number of axes of symmetry of a square = .....

[b] Represent the following distribution by a frequency polygon :

Set	0 –	4 –	8 –	12 –
Frequency	8	12	6	10

### Additional question

- [a] On a coordinate plane, draw the triangle ABC in which  $A(4, 5)$ ,  $B(6, 5)$  and  $C(4, 2)$ , then draw its image by reflection in  $\overline{AB}$   
[b] Solve each of the following equations in  $\mathbb{N}$  :  
(1)  $2x - 9 = 11$  (2)  $x + 3 = 6$

## 14 El-Sharkia Governorate

Directorate of Education  
Experimental Schools Directory



Answer the following questions :

1 Choose the correct answer :

- [a]  $\frac{3}{4}$  .....  $\mathbb{N}$  (  $\in$  or  $\notin$  or  $\subset$  or  $\not\subset$  )  
[b]  $\{2, 4, 6\}$  .....  $\mathbb{N}$  (  $\in$  or  $\notin$  or  $\subset$  or  $\not\subset$  )  
[c] If  $x$  is an odd number, then  $x + 2$  is .....  
( an odd or an even or a prime )  
[d] If the base length of triangle is 8 cm. and its corresponding height is 5 cm., then its area is .....  
( 40 cm. or  $40 \text{ cm}^2$  or 20 cm. or  $20 \text{ cm}^2$  )

**2 Complete the following :**

- [a] If side length of a square is 10 cm. , then its area = ..... cm<sup>2</sup>  
 [b] The smallest natural number is .....  
 [c] The circumference of a circle with radius 7 cm. and  $\pi = \frac{22}{7}$  is .....  
 [d] The multiplicative neutral element in  $\mathbb{N}$  is .....

**3 Find the result using properties of addition and multiplication in  $\mathbb{N}$  :**

- [a]  $46 + 39 + 54$  [b]  $4 \times 17 \times 25$   
 [c]  $19 \times 64 + 19 \times 36$  [d]  $101 \times 29$

**4 [a] If the diagonal length of a square is 6 cm. Find its area ?**

- [b] Find the length of diameter of a circle if its circumference is 88 cm. and  $\pi = \frac{22}{7}$

**5 The following table shows the marks of 28 students in maths exam in a month :**

Sets	10 –	20 –	30 –	40 –
Frequency	6	9	8	5

Draw the frequency polygon which represent the given data.

**Additional question**

**Which is greater in area ?**

A rhombus in which the lengths of its diagonals are 6 cm. and 8 cm.  
 or a parallelogram in which the length of its base is 10 cm. and the corresponding height is 5 cm. , then calculate the difference between them.

**15 El-Monofia Governorate**

Tala Educational Directorate  
Maths Supervision



Answer the following questions :

**1 Choose the correct answer :**

- [a] The sum of two natural numbers .....  $\mathbb{N}$   
 (  $\in$  or  $\notin$  or  $\subset$  or  $\not\subset$  )  
 [b] The sum of two numbers is 20 , if one of them is  $x$  , then the other  
 = ..... (  $20 + x$  or  $20 - x$  or  $x - 20$  or  $\frac{x}{20}$  )



- [c] The circumference of a circle of radius length 10 cm. is .....  $\pi$  cm.  
 ( 31.4 or 62.8 or 10 or 20 )

- [d]  $x - 18$  .....  $x - 17$  where  $x$  is a natural number greater than 20  
 (  $>$  or  $<$  or  $=$  or  $\geq$  )

**2 Complete each of the following :**

- [a] 99 added to the multiplicative neutral element in  $\mathbb{N}$  = .....  
 [b]  $78 + 49 = 49 +$  ..... ( ..... property )  
 [c] If we subtract 8 from twice the number  $x$  , then we shall get  
 the number .....  
 [d]  $6 + 20 \div 4 \times 5 =$  .....

**3 [a] Use the properties of addition and multiplication to find the result :**

- (1)  $973 + 299 + 227 + 901$  (2)  $95 \times 101$

- [b] Write the following set in the listing method and represent it on the number line :  $X = \{x : x \in \mathbb{N}, x < 5\}$

**4 [a] Which is greater in area ?**

A square whose diagonal length is 10 cm. or a triangle in which the length of its base 15 cm. and the length of the corresponding height 8 cm.

- [b] On the 2-dimensional coordinate plane , draw the triangle  $\triangle ABC$  where  $A(3, 5)$  ,  $B(6, 5)$  and  $C(3, 2)$  , then find the lengths of  $\overline{AC}$  and  $\overline{AB}$

**5 The following table shows the marks of 50 pupils in maths exam :**

Sets	10 –	20 –	30 –	40 –	Total
Frequency	10	12	18	10	50

Represent these data by the histogram and the frequency polygon.

**Additional question**

The following table shows the favourite games for 20 pupils :

Game	Football	Basketball	Volleyball
Number	10	5	5

Represent these data using a pie graph.



# 16 El-Monofia Governorate

Sirs El-Lian Experimental School



Answer the following questions :

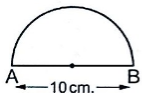
## 1 Choose the correct answer :

- [a] A square in which the length of its diagonal = 10 cm.  
its area = ..... cm<sup>2</sup> ( 100 or 50 or 75 or 80 )
- [b] 9 is subtracted from the double of the number  $x$  = .....  
(  $9 - 2x$  or  $2x - 9$  or  $9x + 2$  or  $18x$  )
- [c] The circumference of a circle whose  $r = 14$  cm. and ( $\pi = \frac{22}{7}$ ) equals ..... cm.  
( 22 or 44 or 66 or 88 )
- [d] If  $P$  is the set of prime numbers , then :  $P$  .....  $\mathbb{N}$   
(  $\in$  or  $\notin$  or  $\subset$  or  $\not\subset$  )

## 2 [a] Complete :

- (1)  $64 + (63 + \dots) = (64 + \dots) + 35 = \dots + 35 = \dots$
- (2) The smallest natural number is .....

## [b] In the opposite figure :

The length of  $\overline{AB}$  of semicircle is 10 cm.Find the distance around the figure. ( $\pi = 3.14$ )3 [a] Use the distributive property to find :  $23 \times 46 + 23 \times 54$ [b] Using the properties in  $\mathbb{N}$  to find the result of :

- (1)  $8 \times 17 \times 125$  (2)  $77 + 36 + 23 + 64$

## 4 [a] Find the area of a triangle whose base length = 12 cm. and its corresponding height = 9 cm.

## [b] Complete :

- (1)  $E \cap \mathbb{N} = \dots$  (where  $E$  is the set of even numbers)
- (2)  $\mathbb{N} - O = \dots$  (where  $O$  is the set of odd numbers)

## 5 [a] Complete :

- (1) The multiplicative identity in  $\mathbb{N}$  added to 99 equals .....
- (2) The set of natural numbers less than or equal to 5 is .....


## [b] Represent the following data by a histogram :

Sets	5 -	7 -	9 -	11 -
Frequency	4	12	9	6



## Additional question

Put (✓) for the correct statement and (X) for the incorrect one :

- [a] If :  $x + 2 = 5$  ,  $x \in \mathbb{N}$  , then :  $2x = 6$  ( )
- [b] The isosceles trapezium has two axes of symmetry. ( )
- [c] A rhombus of diagonals length 6 cm. and 5 cm. , its area = 30 cm<sup>2</sup> ( )
- [d] The following geometric transformation  is rotation ( )

# 17 El-Dakahlia Governorate

Maths Supervision for E.L.S.



Answer the following questions :

## 1 Complete :

- [a] The additive neutral element in ( $\mathbb{N}$ ) is ..... , while the multiplicative neutral element in ( $\mathbb{N}$ ) is .....
- [b] The difference between two numbers is 5 , the smaller one is  $x$  , then the greater number is .....
- [c] The area of a triangle is 20 cm<sup>2</sup> and the length of its base is 8 cm. , then the corresponding height to this base is ..... cm.
- [d] The set of natural numbers which are more than 4 and less than 5 is .....

## 2 Choose the correct answer :

- [a] Double the number  $x$  subtracted 7 from it equals .....  
(  $x - 7$  or  $2x - 7$  or  $7x + 2$  or  $14x$  )
- [b]  $(x - 15) \dots (x - 14)$  , where  $x$  is a natural number more than 20  
(  $>$  or  $<$  or  $=$  or  $\geq$  )
- [c] The difference between  $\frac{1}{2}$  circumference of a circle and the perimeter of the semicircle of this circle is .....  
(  $\pi$  or  $r$  or  $2\pi r$  or  $d$  )
- [d]  $x$  is an odd number , then :  $x + 3$  is .....  
( an odd or an even or a prime )

3 [a] Four successive even natural numbers , the greatest number of them is  $x + 13$  , write down these numbers.

[b] Which is greater in area ?

the triangle whose base length is 12 cm. and the corresponding height = 8 cm. or the square whose the length of its diagonal = 8 cm.

4 [a] Using the distribution property to find the value of the following :  
123 × 98

[b] Calculate the circumference of the circle in which its radius length = 14 cm. ( $\pi = \frac{22}{7}$ )

5 The following table shows the marks of 40 pupils in mathematics exam :

Sets	10 –	20 –	30 –	40 –	50 –	Total
Frequency	5	7	12	A	7	40

[a] Find the value of A

[b] Draw the frequency polygon which represent these data.

[c] How many pupils were got less than 30 marks ?

### Additional question

[a] Find the height of the parallelogram with an area 48 cm<sup>2</sup> and its base length is 8 cm.

[b] Solve the equation :  $3x + 8 = 29$  where  $x \in \mathbb{N}$

## 18 Ismailia Governorate

Directorate of Education  
Mathematics Inspection



Answer the following questions :

1 Complete the following :

[a]  $y \times \dots = \dots \times x$  (..... property)

[b] If :  $X = \{a : a \in \mathbb{N}, a \leq 4\}$ , then :  $X = \dots$

[c] If :  $a = 4$ ,  $b = 3$ , then :  $2 \times a + 5 \times b = \dots$

[d] A circle, its circumference is 66 cm., then the length of its diameter is ..... cm. ( $\pi = \frac{22}{7}$ )

2 Choose the correct answer :

[a]  $(3 + 6) \dots \mathbb{N}$  ( $\in$  or  $\notin$  or  $\subset$  or  $\not\subset$ )

[b] A square, its diagonal length is 6 cm., then its area is ..... cm<sup>2</sup>  
(36 or 18 or 12 or 20)



[c] The expression of 3 is subtracted from two times a number y is .....  
( $2y + 3$  or  $2y - 3$  or  $3y - 2$  or  $3y + 3$ )

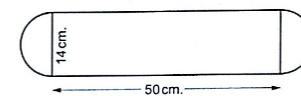
[d] Samar is n years old, then Samar's age after 5 years will be ..... years.  
( $n - 5$  or  $n + 5$  or  $5n$  or  $5n - 1$ )

3 By using the properties of addition and multiplication in  $\mathbb{N}$ , find :

[a]  $35 \times 28 + 35 \times 72$  [b]  $76 + 29 + 24 + 21$

4 [a] A triangle, its area is 60 cm<sup>2</sup> and base length is 6 cm. Find its height.

[b] Find the perimeter of the opposite figure ( $\pi = \frac{22}{7}$ )



5 [a] On the coordinate plane, draw the triangle ABC where A (2, 1), B (6, 1) and C (4, 5)

[b] Represent the following data by a frequency polygon :

Sets	5 –	10 –	15 –	20 –
Frequency	4	7	2	9

### Additional question

[a] In a coordinate plane, represent the points A (2, 3), B (3, 5) and (5, 3). Find the image of  $\triangle ABC$  by reflection in  $\overline{AC}$

[b] Complete in the same pattern :

(1) 1 000, 100, 10, ....., .....

(2) 20, 19, 17, 14, ....., .....

## 19 Suez Governorate

Maths Inspection



Answer the following questions :

1 Complete :

[a] The area of square =  $\frac{1}{2} \times \dots \times \dots$

[b] The multiplicative neutral element in  $\mathbb{N}$  is .....

[c] The set of natural numbers ( $\mathbb{N}$ ) – the set of odd numbers (O) = .....



[d] The smallest natural number is .....

[e] The circumference of a circle with radius length 10 cm. is .....  $\pi$  cm.

**2 Choose the correct answer :**

[a] The set of even numbers (E) .....  $\mathbb{N}$

( $\in$  or  $\notin$  or  $\subset$  or  $\not\subset$ )

[b] The sum of two numbers A and B is 10 , then : B = .....

(10 - A or A - 10 or A or 10)

[c]  $\frac{\text{The circumference of the circle}}{\text{The diameter length of the circle}} = \dots\dots\dots$

(r or  $2\pi$  or  $\pi$  or  $\frac{1}{2}\pi$ )

[d] x is an odd number , then x + 3 is ..... number.

(an odd or an even or a prime)

[e]  $(49 \div 8)$  .....  $\mathbb{N}$

( $\subset$  or  $\in$  or  $\not\subset$  or  $\notin$ )

**3 [a] On a 2-dimensional coordinate plane , locate the points :**

A (8 , 2) , B (3 , 2) , C (3 , 6) and D (8 , 6) , then write the name the figure ABCD

**[b] Find the area of the triangle of base length 5 cm. and the corresponding height is 6 cm.**

**4 [a] Find the circumference of a circle of diameter length 14 cm. ( $\pi = \frac{22}{7}$ )**

**[b] Find the area of a square of diagonal length 6 cm.**

**5 The following table shows the marks of 35 pupils in math exam :**

The set	10 -	20 -	30 -	40 -	Total
Frequency	8	12	10	5	35

Represent these data by a frequency polygon.

**Additional question**

**[a] Find the area of the rhombus whose perimeter is 36 cm. and its height 5.4 cm.**

**[b] Solve the following equation :  $2x - 5 = 7$  , where  $x \in \mathbb{N}$**



**20 Kafr El-Sheikh Governorate**

Fowa Educational Zone  
Zween E.I.S.



Answer the following questions :

**1 Choose the correct answer :**

[a] If the circumference of a circle is 44 cm. , then its diameter length = ..... cm. ( $\pi = \frac{22}{7}$ ) (14 or 22 or 44 or 66)

[b] The square whose area is  $72 \text{ cm}^2$  , then the length of its diagonal = ..... cm. (15 or 12 or 41 or 144)

[c] Subtract 9 from twice of the number x is ..... ( $x - 9$  or  $9 - x$  or  $2(x + 9)$  or  $2x - 9$ )

[d] The multiplicative neutral element in  $\mathbb{N}$  is ..... (0 or 1 or 2 or 5)

[e]  $8 \times 45 \times \dots\dots\dots = 45\,000$  (10 or 20 or 125 or 25)

**2 Complete each of the following :**

[a] The area of the triangle whose base length is 7 cm. and its corresponding height is 4 cm. is .....

[b] If x is an even number , then x + 2 is ..... number.

[c] If :  $7 + \dots\dots\dots = 7$  is called ..... property.

[d]  $\frac{3+6}{5-5} = \dots\dots\dots$

[e] 99 is added to the multiplicative neutral of natural numbers = .....

**3 [a] Write in the listing method :  $X = \{x : x \in \mathbb{N}, 3 \leq x < 5\}$**

, then represent its elements on the number line.

**[b] Use the properties of operations in  $\mathbb{N}$  to find the result of each of the following :**

(1)  $37 + 75 + 63 + 25$  (2)  $67 \times 125 - 67 \times 25$

**4 [a] Which is greater in area ? a square whose diagonal length is 12 cm. or a triangle whose base length is 10 cm. and height is 9 cm.**

**[b] On a coordinate plane , draw the figure ABCD in which A (1 , 1) , B (1 , 3) , C (4 , 3) , D (5 , 1) , then write the name of the figure.**

5 [a] Put the suitable relation ( $>$ ,  $=$  or  $<$ ) :

- (1)  $(x - 11) \dots\dots\dots (x - 13)$  where  $x$  is a natural number more than 23  
 (2) The additive neutral in  $\mathbb{N} \dots\dots\dots$  the smallest prime number in  $\mathbb{N}$

[b] Represent these data by a frequency polygon :

Sets	4 -	6 -	8 -	10 -	Total
Frequency	12	8	16	14	50

### Additional question

An employee spends his monthly salary as follows :

1 000 pounds for food , 500 pounds for clothes , 250 pounds for the rent of the flat and 250 pounds for other spending.

Represent these data by a pie graph.

## 21 El-Beheira Governorate

Bandr Kafr El-Dawaar  
Educational Zone



Answer the following questions :

1 Complete :

- [a] The sum of two numbers is 20 , if one of them is  $x$  , then the other = .....  
 [b] The square whose diagonal length is 6 cm. , then its area = .....  $\text{cm}^2$   
 [c] The set of natural numbers less than 5 is .....  
 [d] The triangle whose base length is 5 cm. and its corresponding height is 6 cm. , then its area = .....  $\text{cm}^2$

2 Choose the correct answer :

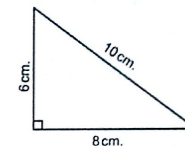
- [a] Twice the number  $x$  subtracted 7 from it = .....  
 ( $x - 7$  or  $2x + 7$  or  $2x - 7$  or  $7 - 2x$ )  
 [b] If  $x$  is an odd number , then  $x + 2$  is ..... number.  
 (an odd or an even or a prime)  
 [c] The circumference of a circle = .....  
 ( $2\pi$  or  $2 \times d$  or  $\pi \times d$  or  $2\pi \times d$ )  
 [d] The product of any two natural numbers .....  $\mathbb{N}$   
 ( $\in$  or  $\notin$  or  $\subset$  or  $\not\subset$ )



3 [a] Use the properties of the operations in  $\mathbb{N}$  to find the result of each :

- (1)  $34 \times 1\,001$  (2)  $892 + 526 + 108 + 474$

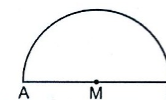
[b] Calculate the area of the opposite triangle.



4 [a] If the age of a man now is  $x$  years where  $x \in \mathbb{N}$  , find :

- (1) The age of the man after 7 years.  
 (2) The age of the man since 5 years.

[b] Calculate the perimeter of the opposite figure where  $AB = 21 \text{ cm}$ . ( $\pi = \frac{22}{7}$ )



5 [a] Which is greater in area ?

A triangle whose base length is 12 cm. and its corresponding height is 8 cm. or a square of side length 7 cm.

[b] Represent these data using a histogram :

Sets	10 -	20 -	30 -	40 -	Total
Frequency	6	12	8	4	30

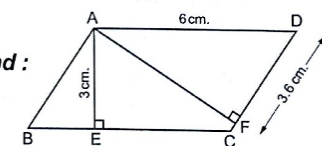
### Additional question

In the opposite figure :

ABCD is a parallelogram in which

$AD = 6 \text{ cm}$  ,  $AE = 3 \text{ cm}$  ,  $CD = 3.6 \text{ cm}$ . Find :

- (1) The area of the parallelogram ABCD  
 (2) The length of  $AF$



## 22 El-Fayoum Governorate

West Educational Zone  
Salam Language School



Answer the following questions :

1 Choose the correct answer :

- [a]  $(3 + 9) \dots\dots\dots \mathbb{N}$  ( $\in$  or  $\notin$  or  $\subset$  or  $\not\subset$ )



# Final Examinations

- [b] The triangle whose base length is 8 cm. and its corresponding height is 5 cm. , then its area = ..... cm<sup>2</sup> ( 9 or 40 or 8 or 20 )
- [c] The square whose diagonal length is 8 cm. , its area = ..... cm<sup>2</sup>  
( 64 or 32 or 16 or 24 )
- [d] If 9 is subtracted from a number , the result is 23 , then : .....  
( 9 x = 23 or x - 9 = 23 or x + 9 = 23 or 23 - x = 9 )

## 2 Complete :

- [a]  $32 + (59 + \dots) = (32 + 68) + \dots$
- [b] The square whose side length is 10 cm. , its area = ..... cm<sup>2</sup>
- [c] ..... is the additive neutral element in  $\mathbb{N}$
- [d]  $5 \times 14 = 14 \times x$  , then :  $x = \dots$

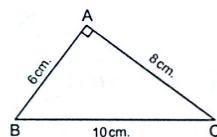
## 3 [a] Use the commutative and associative properties to find with steps :

(1)  $28 + 59 + 72$  (2)  $4 \times 33 \times 25$

- [b] Write the following set in the listing method and represent it on the number line :  $M = \{a : a \in \mathbb{N}, 2 \leq a \leq 5\}$

## 4 [a] Find the circumference of a circle whose diameter length is 14 cm. ( $\pi = \frac{22}{7}$ )

- [b] ABC is a right-angled triangle at A ,  
AC = 8 cm. , AB = 6 cm. and BC = 10 cm.  
Find the area of :  $\triangle ABC$



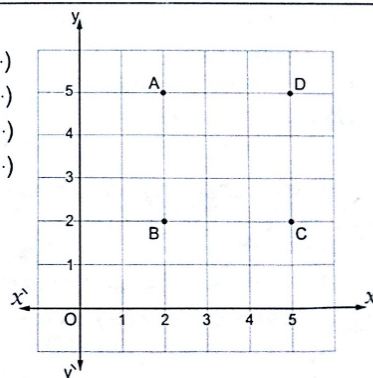
## 5 [a] From the opposite figure :

Complete : A (..... , .....)

B (..... , .....)

C (..... , .....)

D (..... , .....)



# Final Examinations



- [b] The following table shows the marks of 50 pupils in exam of mathematics in one month :

Sets	10 -	20 -	30 -	40 -	Total
Frequency	10	12	18	10	50

Draw histogram which represent these data.

## Additional question

- [a] Graph the figure ABCD where A (2 , 7) , B (3 , 4) , C (8 , 4) and D (7 , 7)  
What is the name of the figure ABCD ?
- [b] Solve the equation :  $2x - 4 = 12$  ,  $x \in \mathbb{N}$

## 23

## Beni Suef Governorate

El-Shoruk Exp. Lang. School



Answer the following questions :

## 1 Complete :

- [a]  $\frac{0}{7}$  .....  $\mathbb{N}$  [b]  $a + b = c$  (..... property)
- [c] For  $a \in \mathbb{N}$  ,  $b \in \mathbb{N}$  , then :  $a \times b$  .....  $\mathbb{N}$
- [d] The set of natural numbers less than 4 is { ..... }

## 2 Evaluate using the properties of multiplication and addition in $\mathbb{N}$ :

- [a]  $125 \times 19 \times 8$  [b]  $56 \times 1002$
- [c]  $257 + 51 + 49$

## 3 Choose the correct answer :

- [a] The area of a triangle whose base length is 5 cm. and the corresponding height is 6 cm. is ..... cm<sup>2</sup>. ( 30 or 15 or 25 or 36 )
- [b] If the diameter length in a circle is 7 cm. , then the circumference is ..... cm. ( $\pi = \frac{22}{7}$ ) ( 3.5 or 7 or 22 or 44 )
- [c] The area of a square whose diagonal length is 6 cm. is ..... cm<sup>2</sup>  
( 18 or 36 or 12 or 6 )
- [d] The sum of two numbers a and b is 10 , then :  $b = \dots$   
( 10 - a or a - 10 or 10 + a or b - 10 )

**4 Find the equation :**

- [a] Add 3 to the double of the number  $x$   
 [b] Subtract 8 from a number  
 [c] The perimeter of a square whose side length is  $L$

**5 The following table shows the record temperatures in 40 cities on a day :**

Temperatures	20 –	22 –	24 –	26 –	28 –	Total
Number of cities	7	9	11	8	5	40

Draw each of the histogram and the frequency polygon.

**Additional question**

- [a] If the area of a rhombus is  $30 \text{ cm}^2$  and its side length is 6 cm, then find its height.  
 [b] Complete in the same pattern :  
 (1) 5, 15, 25, .....  
 (2) 1, 1, 2, 3, 5, 8, .....

**24 El-Menia Governorate**

El-Menia Educational Zone

Answer the following questions :

**1 Complete :**

- [a] The least natural number is .....  
 [b] The sum of a number  $x$  and 3 is .....  
 [c] The area of the triangle =  $\frac{1}{2} \times \dots \times \dots$   
 [d] The additive identity element is .....  
 [e]  $17 + \dots = \dots + 17 = 17$

**2 Choose the correct answer :**

- [a]  $(5 - 7) \dots \mathbb{N}$  ( $\in$  or  $\notin$  or  $\subset$  or  $\supset$ )  
 [b] The area of the square of side length 5 cm. is .....  $\text{cm}^2$   
 (20 or 5 or 25 or 15)  
 [c]  $E \cap O = \dots$  ( $O$  or  $\mathbb{N}$  or  $E$  or  $\emptyset$ )  
 [d] Twice of a number  $y$  is .....  
 ( $2 + y$  or  $2y$  or  $y - 2$  or  $y \div 2$ )



[e] The multiplicative neutral element in  $\mathbb{N}$  is .....

(0 or 1 or  $\emptyset$  or 2)

**3 [a] Use the commutative and associative properties to find the value of each of the following :**

- (1)  $125 + 254 + 375 + 246$  (2)  $4 \times 65 \times 25$

[b] Find the area of square whose diagonal length is 10 cm.

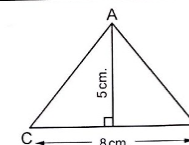
**4 [a] On the coordinate plane, locate the following points A (3, 5), B (6, 5) and C (3, 2), then complete :**

- (1) The length of  $\overline{AC}$  = ..... units.  
 (2) The length of  $\overline{AB}$  = ..... units.

[b] Find the circumference of a circle whose diameter length is 14 cm. ( $\pi = \frac{22}{7}$ )

**5 [a] In the opposite figure :**

Find the area of the triangle ABC



[b] The following table shows the frequency distribution of the number of working hours of 50 workers :

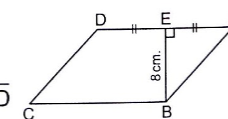
Sets	4 –	6 –	8 –	10 –	Total
Frequency	12	8	16	14	50

Draw the frequency polygon which represents these data.

**Additional question**

In the opposite figure :

The area of the parallelogram ABCD is  $96 \text{ cm}^2$ ,  $BE = 8 \text{ cm}$ ,  $\overline{BE} \perp \overline{AD}$  and E is the midpoint of  $\overline{AD}$ . Calculate the area of the figure EBCD





## 25 Assiut Governorate

Manfalout Educational Administration  
Gamal Abd El-Nasser E.L.S.

Answer the following questions :

## 1 Choose the correct answer :

- [a] The square whose diagonal length is 8 cm. , its area = ..... cm<sup>2</sup>  
( 64 or 32 or 16 or 8 )
- [b] If :  $X = \{x : x \in \mathbb{N}, 3 \leq x < 5\}$  , then :  $x \in$  .....  
( {4} or {3} or {3, 4} or {4, 5} )
- [c] If O is the set of odd numbers , then :  $O \dots \mathbb{N}$   
(  $\subset$  or  $\in$  or  $\not\subset$  or  $\notin$  )
- [d]  $(49 \div 8) \dots \mathbb{N}$  (  $\subset$  or  $\in$  or  $\not\subset$  or  $\notin$  )

## 2 Complete the following :

- [a] The circumference of a circle with radius length 10 cm. is .....  $\pi$  cm.
- [b] For any natural numbers a , b and c where  $(a \times b) \times c = a \times (b \times c)$  is called ..... property.
- [c] The multiplicative neutral element in  $\mathbb{N}$  is .....
- [d] The set of even numbers (E) – the set of odd numbers (O) = .....

3 [a] If the age of a man now is x years where  $x \in \mathbb{N}$  , find :

- (1) The age of the man after 7 years.
- (2) The age of the man since 10 years.

[b] Using the properties of commutative , distributive and associative , find the value of each of the following :

- (1)  $8 \times 137 \times 125$  (2)  $28 + 59 + 72$

## 4 [a] The triangle whose base length is 5 cm. and the corresponding height of it is 6 cm. , find its area.

[b] Find the circumference of a circle whose diameter length is 14 cm. ( $\pi = \frac{22}{7}$ )

## 5 The following table is a frequency distribution for the working hours of 50 workers , graph these data using the frequency polygon :

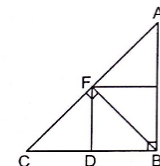
Sets	2 –	4 –	6 –	8 –	10 –	Total
Frequency	8	9	15	16	2	50



## Additional question

[a] In the opposite figure , complete :

- (1)  $\triangle BEF$  is the image of  $\triangle AEF$   
by reflection in .....
- (2)  $\triangle BDF$  is the image of  $\triangle CDF$   
by reflection in .....

[b] Solve each of the following equations : (1)  $\frac{1}{2}x = 7$  (2)  $10 - x = 4$ 

## 26 Souhag Governorate

Maths Inspection



Answer the following questions :

## 1 Complete the following :

- [a] The additive neutral element in  $(\mathbb{N})$  is ..... while the multiplicative neutral element in  $(\mathbb{N})$  is .....
- [b] The side length of a square is 10 cm. , then its area = ..... cm<sup>2</sup>
- [c] The area of the triangle =  $\frac{1}{2} \times$  .....  $\times$  .....
- [d] If :  $86 \times 15 = 86 \times x + 86 \times 10$  , then :  $x =$  .....

## 2 Choose the correct answer from these between brackets :

- [a]  $75 + 89 = 89 +$  ..... ( 75 or 100 or 89 or 57 )
- [b] The area of a triangle whose base length is 5 cm. and the corresponding height is 6 cm. is ..... cm<sup>2</sup> ( 30 or 15 or 25 or 36 )
- [c] Subtract 3 from twice the number  $x =$  .....  
(  $x - 3$  or  $2x + 3$  or  $2x - 3$  or  $x + 4$  )
- [d] The diameter length of the circle whose circumference is 88 cm. = ..... cm. ( $\pi = \frac{22}{7}$ ) ( 28 or 14 or 7 or 21 )

## 3 Use the properties of operations to find the result of :

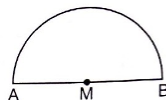
- [a]  $38 + 47 + 62 + 53$  [b]  $8 \times 37 \times 125$

## 4 [a] The diagonal length of a square is 6 cm. Find its area.

[b] Find the circumference of a circle if its diameter length is 7 cm. ( $\pi = \frac{22}{7}$ )

**5 [a] In the opposite figure :**

The length of the diameter  $\overline{AB}$  of a semicircle is 14 cm.



Find the perimeter of the opposite figure ( $\pi = \frac{22}{7}$ )

[b] The following table shows the marks of 35 pupils in exam of mathematics in one month where the full mark is 35 marks :

Sets	10 –	20 –	30 –	40 –	Total
Frequency	8	12	10	5	35

Draw the histogram and the frequency polygon which represent these data.

**Additional question**

Draw the figure ABCD in the coordinate plane where A (1, 2), B (1, 5), C (4, 5) and D (4, 2)

[a] What is the name of the figure ABCD ?

[b] How many lines of symmetry of this figure ?

**27 Qena Governorate**

Mathe Inspection



Answer the following questions :

**1 Complete :**

[a] The smallest counting number is .....

[b] The additive identity element in  $\mathbb{N}$  is .....

[c] The symbolic expression of "9 more than a number" is .....

[d]  $(45 \times 32) \times 81 = 45 \times (\dots \times 81)$  (..... property)

[e]  $E \cap P = \dots$

**2 Choose the correct answer :**

[a] If:  $X = \{x : x \in \mathbb{N}, x \leq 1\}$ , then:  $X = \dots$

( {0} or {1} or {0, 1} or {1, 2} )

[b] If the sum of two numbers is 10 and one of them is  $x$ , then the other is ..... (  $10 + x$  or  $10 - x$  or  $x - 10$  or  $10x$  )

[c]  $\frac{7}{0} = \dots$  ( 0 or 1 or 7 or meaningless )



[d]  $\{5, 2.3\} \dots \mathbb{N}$  ( $\in$  or  $\notin$  or  $\subset$  or  $\not\subset$ )

[e] If the circumference of a circle =  $5\pi$  cm., then the radius length = ..... cm. ( 15.7 or 10 or 5 or 2.5 )

**3 [a] Find the area of the triangle whose base length is 8 cm. and its corresponding height is 10 cm.**

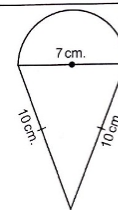
[b] Use the properties of operations in  $\mathbb{N}$  to find the result of each of the following :

(1)  $78 + 49 + 22 + 51$

(2)  $587 \times 1001$

**4 [a] Find the perimeter of the opposite figure.**

( $\pi = \frac{22}{7}$ )



[b] Which is greater in area ?

a square of side length 7 cm. or

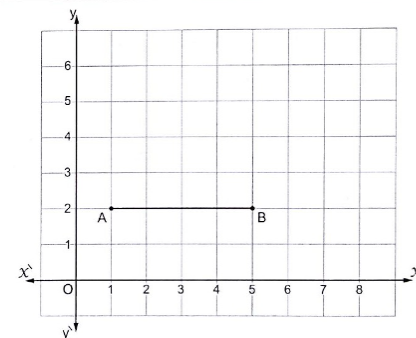
a square its diagonal length is 10 cm.

**5 [a] By using the opposite figure, complete :**

(1) A (....., .....)

(2) B (....., .....)

(3) AB = ..... units



[b] Use the following frequency table to draw the frequency polygon :

Sets	2 –	4 –	6 –	8 –
Frequency	50	30	40	10

**Additional question**

[a] Find the midpoint of  $\overline{AB}$  if A (0, 4) and B (8, 4)

[b] Solve the equation :  $2x - 7 = 5$  where  $x \in \mathbb{N}$



## 28 Aswan Governorate

Eng.M.M.  
Yakoub Language School

Answer the following questions :

## 1 Complete :

[a] Area of a square =  $\frac{1}{2} \times \dots \times \dots$

[b]  $36 + 19 = \dots + 36$

[c] If  $x$  is an even number, then  $x + 2$  is ..... number.

[d]  $19 \times (25 + \dots) = 19 \times 25 + 19 \times 75$

## 2 Choose the correct answer :

[a] The identity element of adding in  $\mathbb{N}$  is .....

(0 or 1 or 2 or 3)

[b]  $\frac{3}{5} \dots \mathbb{N}$

( $\in$  or  $\notin$  or  $\subset$  or  $\supset$ )

[c]  $0 \div 12 = \dots$

(12 or 0 or 1)

[d] The smallest natural number is .....

(0 or 1 or 2 or 3)

3 [a] The base length of a triangle is 9 cm. and its height is 6 cm.  
Find its area.[b] If the age of a man is  $x$  years, then find his age after 5 years.4 [a] The diameter length of a circle is 21 cm. , find the circumference  
of the circle ( $\pi = \frac{22}{7}$ )[b] Use properties of addition in  $\mathbb{N}$  to find the value of :  $48 + 97 + 52$ 

## 5

Sets	5 -	10 -	15 -	20 -
Frequency	4	12	9	5

Represent these data by a histogram.

## Additional question

[a] In the cartesian coordinate plane, draw the figure ABCD where  
 $A(8, 5)$ ,  $B(8, 2)$ ,  $C(5, 2)$  and  $D(5, 7)$ , if  $\overline{CD}$  is the axis of  
reflection of the figure ABCD, draw the image of the figure ABCD

[b] Solve each of the following equations :

(1)  $x + 7 = 19$ ,  $x \in \mathbb{N}$

(2)  $3x = 21$ ,  $x \in \mathbb{N}$



## 29 South Sinai Governorate Tour Sinai Educational Zone



Answer the following questions :

## 1 Complete the following :

[a] The smallest natural number is .....

[b]  $75 + 89 = 89 + 75$  (..... property)

[c] The additive identity in  $\mathbb{N}$  is ..... but the multiplicative identity in  $\mathbb{N}$   
is .....[d] The area of the square =  $\frac{1}{2}$  the length of its diagonal  $\times$  .....

## 2 Choose the correct answer from those between brackets :

[a]  $(3 + 9) \dots \mathbb{N}$  ( $\in$  or  $\notin$  or  $\subset$  or  $\supset$ )

[b] Subtract 7 from the number  $x = \dots$ (  $x - 7$  or  $2x - 7$  or  $7x + 2$  or  $14x$  )[c] If we multiply the number  $x$  by 7, then we subtract from the result 3,  
we shall get .....(  $7x + 3$  or  $3x + 7$  or  $7x - 3$  or  $x - 21$  )[d] The side length of a square is  $L$ , then its perimeter  $P = \dots$ (  $4L$  or  $L + 4$  or  $L - 4$  or  $\frac{1}{4}L$  )

3 [a] Form an equation : A number if added to it 7, the result is 15

[b] Find the product using commutative and associative properties  
in  $\mathbb{N}$  (state the property used) :  $2 \times 47 \times 5$ 

4 [a] Find the circumference of a circle with diameter length 14 cm.

( $\pi = \frac{22}{7}$ )[b] Find the area of the triangle in which the length of its base is 12 cm.  
and its corresponding height is 5 cm.

## 5 [a] Complete :

(a) Area of a triangle =  $\frac{1}{2} \times \dots \times \dots$

(b) Circumference of the circle =  $\dots \times \dots$

[b] The following table shows the marks of 50 pupils in exam of mathematics in one of months where the full mark is 50 marks :

Sets	10 –	20 –	30 –	40 –	Total
Frequency	10	12	18	10	50

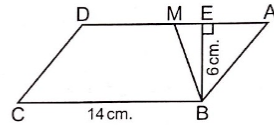
Draw the frequency polygon which represent these data.

### Additional question

In the opposite figure :

ABCD is a parallelogram in which  $BC = 14$  cm. ,  $BE = 6$  cm. and M is the midpoint of  $\overline{AD}$  , find :

- The length of  $\overline{AD}$  and  $\overline{AM}$
- The area of parallelogram ABCD
- The area of  $\triangle ABM$
- The area of the figure MBCD



## 30 Matrouh Governorate

Maths Inspection



Answer the following questions :

### 1 Complete the following :

- The smallest natural number is .....
- Add 6 to the number  $x$  , the symbolic expression is .....
- $213 + 57 = 57 + \dots$
- The circumference of a circle = .....  $\times$  the diameter length

### 2 Choose the correct answer :

- 2 .....  $\mathbb{N}$  ( $\in$  or  $\notin$  or  $\subset$  or  $\supset$ )
- Area of the triangle = ..... the length of its base  $\times$  its corresponding height ( $\frac{1}{4}$  or  $\frac{1}{2}$  or  $\frac{1}{3}$  or  $\frac{1}{5}$ )
- The multiplicative neutral element in  $\mathbb{N}$  is ..... (zero or 1 or 2 or 3)
- An odd number + an even number = ..... number. (an even or an odd or a prime)



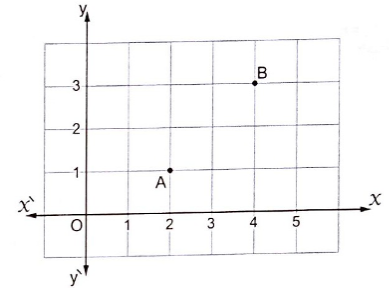
### 3 [a] Use the distribution property to find the value of : $45 \times 99$

[b] Represent on a number line the set of natural number less than 4

### 4 [a] The diagonal length of a square is 6 cm. Find its area.

[b] From the coordinate plane illustrated in the opposite figure , complete :

- A ( ..... , ..... )
- B ( ..... , ..... )



### 5 [a] Soheer saved 14 pounds , she bought 3 notebooks for $x$ pounds each , the remainder with her is 8 pounds.

Choose the equation that represents this situation :

- $14 + 3x = 8$
- $8 - 3x = 14$
- $3x + 8 = 14$
- $3x - 14 = 8$

[b] The following table shows the marks of 50 pupils in an exam of maths in one of months where the full mark is 50 marks :

Sets	10 –	20 –	30 –	40 –	Total
Frequency	10	12	18	10	50

Represent these data by the histogram and the frequency polygon.

### Additional question

- Draw on the coordinates plane the triangle ABC where A ( 1 , 0 ) , B ( 2 , 2 ) and C ( 2 , 5 ) , then draw its image by reflection in  $\overleftrightarrow{BC}$
- Solve the equation :  $5x + 1 = 11$  where  $x \in \mathbb{N}$